

Appl. No. 10/034,227
Amdt. dated May 5, 2006
Reply to final Office action of March 8, 2006

Amendments to the Claims:

Please amend the claims to read as provided in the following claim listing.

1.-73. (Canceled).

74. (Currently amended) ~~The integrated circuit of claim 73,~~ An integrated circuit fabricated on a chip, comprising:

multiple on-chip logic analyzers each including a trigger word recognizer;
and

an on-chip memory that captures data in response to match signals from
the trigger word recognizers,

wherein the trigger word recognizers each comprise a Boolean logic
section and a counter/timer section, wherein the Boolean logic
section includes multiple hardware match logical units that compare
a match value with internal state data and produce an output signal
that is true if the comparison indicates a match condition, and
wherein each output signal of a hardware match logical units
connects to both an AND term and an OR term, and a user selects
whether the AND term or the OR term is enabled for each of the
hardware match logical units,

wherein for each trigger word recognizer, the hardware match logical units
for which the AND term is selected have their output signals
combined together in an AND gate, and all the hardware match
logical units for which the OR term is selected have their output
signals combined together in an OR gate,

wherein the output of the AND gate and the output of the OR gate are
selectively combined together in one of either an AND operation, an
OR operation, a NAND operation, or a NOR operation, wherein the
selective combining is performed via a multiplexer, and

wherein the multiplexer output is selectively coupled to a second
multiplexer via two different signal paths, and wherein the first

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signal path remains asserted if a match condition exists, and the second signal path is asserted for a first clock that the match condition exists, and wherein the second multiplexer selects one of the first or second signal path based on a select bit that is programmed by the user.

75. (Canceled).

76. (Currently amended) ~~The integrated circuit of claim 75,~~ An integrated circuit fabricated on a chip, comprising:

multiple on-chip logic analyzers each including a trigger word recognizer;

and

an on-chip memory that captures data in response to match signals from the trigger word recognizers,

wherein the trigger word recognizers each comprise a Boolean logic section and a counter/timer section, wherein the Boolean logic section includes multiple hardware match logical units that compare a match value with internal state data and produce an output signal that is true if the comparison indicates a match condition, and wherein each output signal of a hardware match logical units connects to both an AND term and an OR term, and a user selects whether the AND term or the OR term is enabled for each of the hardware match logical units,

wherein the Boolean logic section includes multiple software match logical units that each receive a software-provided match value and produce an output signal that is true if the software-provided match value is true, and wherein each output signal of the software match logical units connects to both an AND term and an OR term, and the user selects whether the AND term or the OR term is enabled for each of the software match logical units,

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wherein each software match logical unit receives a software-provided match value indicative of one or more non-hardware states in a set consisting of a thread ID, an address-based number, and an interrupt-enable level.

77.-79. (Canceled).

80. (Previously presented) An Integrated circuit fabricated on a chip, comprising:

an on-chip logic analyzer that comprises a trigger word recognizer and a storage word recognizer; and

an on-chip memory that captures data determined by the storage word recognizer in response to a match signal from the trigger word recognizer,

wherein the word recognizers each comprise a Boolean logic section and a counter/timer section, wherein the Boolean logic section includes multiple hardware match logical units that compare a match value with internal state data and produce an output signal that is true if the comparison indicates a match condition, and wherein each said output signal of the hardware match logical units connects to both an AND term and an OR term, and a user selects whether the AND term or the OR term is enabled for each of the hardware match logical units.

81. (Previously presented) The integrated circuit of claim 80, wherein for each word recognizer, the hardware match logical units for which the AND term is selected have their output signals combined together in an AND gate, and all the hardware match logical units for which the OR term is selected have their output signals combined together in an OR gate.

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82. (Previously presented) The integrated circuit of claim 81, wherein the output of the AND gate and the output of the OR gate are selectively combined together in one of either an AND operation, an OR operation, a NAND operation, or a NOR operation, wherein the selective combining is performed via a multiplexer.

83. (Previously presented) The integrated circuit of claim 82, wherein the multiplexer output is selectively coupled to a second multiplexer via two different signal paths, and wherein the first signal path remains asserted if a match condition exists, and the second signal path is asserted for the first clock period that the match condition exists, and wherein the second multiplexer selects one of the first or second signal path based on a select bit that is programmed by the user.

84. (Previously presented) The integrated circuit of claim 80, wherein the Boolean logic section includes multiple software match logical units that receive a software-provided match value and produce an output signal that is true if the software-provided match value is true, and wherein each said output signal of the software match logical units connects to both an AND term and an OR term, and the user selects whether the AND term or the OR term is enabled for each of the software match logical units.

85. (Previously presented) The integrated circuit of claim 84, wherein each software-provided match value is indicative of one or more non-hardware states in a set consisting of a thread ID, an address-based number, and an interrupt level.